APPENDIX A

RESPONSIVENESS SUMMARY

RESPONSIVENESS SUMMARY

Overview

Operable Unit (OU) 7-12, Pad A, is the third OU to be addressed within Waste Area Group (WAG) 7, the Radioactive Waste Management Complex (RWMC) at the Idaho National Engineering Laboratory (INEL). A Proposed Plan was released July 19, 1993, with a public comment period from July 28 to August 26, 1993. The Proposed Plan recommended that limited action, focusing on maintenance and upkeep of the existing soil cover and monitoring to ensure the effectiveness of the existing cover and the protection of groundwater, be taken at Pad A. This Responsiveness Summary recaps and responds to the comments received during the comment period. Generally, the comments reflected a broad range of views, from strong support for the selected alternative to strong opposition to leaving the wastes in place.

Background on Community Involvement

To announce the beginning of the Pad A investigation, public informational meetings were held in December 1992 in Idaho Falls, Twin Falls, Boise, and Moscow. The meetings were to explain the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process. These informational meetings were announced via a fact sheet conveyed through a "Dear Citizen" letter mailed on November 19, 1991, to a mailing list of 5,600 individuals in the general public and 11,700 INEL employees. On November 20, 1991, the U.S. Department of Energy, Idaho Operations Office (DOE-ID) issued a news release to more than 40 newspaper, radio, and television media contacts. Display ads announcing the 30-day public comment period on Pad A appeared between November 22 and November 27, 1991 in eight major Idaho newspapers: the *Post Register* in Idaho Falls, the *Idaho State Journal* in Pocatello, the *South Idaho Press* in Burley, the *Times News* in Twin Falls, the *Idaho Statesman* in Boise, the *Idaho Press Tribune* in Nampa, the *Lewiston Morning Tribune* in Lewiston, and the *Idahonian* in Moscow. Personal telephone calls were made to key individuals, environmental groups, and organizations from INEL field offices in Pocatello, Twin Falls, and Boise. Calls were also made to community leaders in Idaho Falls and Moscow by the Community Relations Plan Coordinator.

When the investigation was complete, a Notice of Availability for the Pad A Proposed Plan was published between July 15 and July 20, 1993, in the *Post Register* (Idaho Falls), the *Idaho State Journal* (Pocatello), the *South Idaho Press* (Burley), the *Times News* (Twin Falls), the *Idaho Statesman* (Boise), the *Lewiston Morning Tribune* (Lewiston), and *The Daily News* (Moscow). A second advertisement was placed in the same newspapers several days before each open house or meeting to remind citizens of the opportunity to attend the meeting and provide oral or written comments. Radio stations in Idaho Falls, Blackfoot, Pocatello, Burley, and Twin Falls ran advertisements during the three days before the open houses in Pocatello and Twin Falls.

The Proposed Plan for the remedial action of Pad A was mailed July 19, 1993, to 6,600 individuals on the INEL mailing list. Copies of the Proposed Plan and the entire Administrative Record are available to the public in eight regional INEL information repositories: the INEL Technical Library in Idaho Falls; city libraries in Idaho Falls, Pocatello, Twin Falls, Boise, and Moscow; the Idaho State Library in Boise; and the Shoshone Bannock Library in Fort Hall. The original documents comprising the Administrative Record are located at the INEL Technical Library; copies from the originals are present in the seven other libraries. These copies were placed in the information repository sections or at the reference desk in each of these libraries.

The public comment period on the Proposed Plan for Pad A was held from July 28 to August 26, 1993. No requests for extensions were made. On August 10, 1993, representatives from DOE-ID, the Environmental Protection Agency (EPA) Region 10, and the State of Idaho Department of Health and Welfare (IDHW) conducted a technical briefing via teleconference with members of the Environmental Defense Institute and the League of Women Voters of Moscow. Open houses were held August 11 and 12, 1993, in Pocatello and Twin Falls, respectively; representatives from DOE-ID and IDHW attended the events to discuss the project and answer questions. Public meetings were held August 17, 18, and 19, in Idaho Falls, Boise, and Moscow, respectively at which over 40 people attended. Representatives from DOE-ID, EPA Region 10, and IDHW were present at the public meetings to discuss the project, answer questions, and receive public comment. Each public meeting was recorded by a court reporter.

This Responsiveness Summary has been prepared as part of the Record of Decision (ROD). All oral comments, as given at the public meetings, and all written comments, as submitted, are repeated verbatim in the Administrative Record for the ROD. Twelve people submitted written comments on the Pad A proposal and ten others gave oral comments at the public meetings. No oral comments were received at the open houses. In order to respond to each issue raised in the comments, DOE further divided the comments into 106 individual comments. These comments are annotated to indicate which response in the Responsiveness Summary addresses each comment. It should be noted that the Responsiveness Summary groups similar comments together, summarizes them, and provides a single response for each comment group. The ROD presents the limited action alternative for the Pad A OU at the INEL, selected in accordance with CERCLA, as amended by the Superfund Amendments and Reauthorization Act (SARA) and, to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). The decision for this OU is based on information in the Administrative Record.

Summary of Comments Received During Public Comment Period

Comments and questions raised during the public comment period on the Pad A Proposed Plan are summarized briefly below. Many of the questions were answered at the public meetings as reflected in the transcripts in the Administrative Record file. An informal open house was held one hour prior to each of the scheduled public meetings to allow the public to discuss the proposed action at Pad A with representatives of IDHW, EPA, and DOE. The public meetings were further divided into an informal question and answer session and a formal public comment session. This meeting format was identified in published announcements and the public was informed at the beginning of each public meeting that the meeting would be divided into two parts—an informal question and answer session, where comments and questions would not be formally recorded by a court reporter and would be immediately responded to by a panel of agency representatives, followed by a formal comment session which would be recorded by a court reporter. The public was requested to provide their formal comments on the Proposed Plan either during the formal comment session of the meeting or in writing prior to the close of the public comment period. This Responsiveness Summary responds to those public comments that were recorded by the court reporter or that were submitted in writing prior to the close of the public comment period.

Comments and questions on a variety of subjects not specific to the Pad A Proposed Plan were recorded including planning and future use, historical issues, procedures and policies, health and safety, availability of information, DOE's responsibilities, and technology development. Responses to those comments are not included in this Responsiveness Summary, however, additional information on these unrelated topics can be obtained from the INEL Public Affairs Office in Idaho Falls; the local INEL offices in Pocatello, Twin Falls, and Boise; or the Environmental Restoration Information Office in Moscow. Comments and questions regarding community participation in general were referred to the INEL Community Relations Coordinator and will be addressed during updates to the Community Relations Plan. Comments and questions on Pad A submitted during the entire comment period are answered below.

History and Design of Pad A

1. **Comment:** One commenter wanted clarification about when Pad A was first commissioned. (W7-6)

   Response: Pad A was constructed in September 1972. Wastes were placed on Pad A beginning in September 1972.

2. **Comment:** Several commenters asked about the life expectancy of the 55-gal drums, the polyethylene liners, and the asphalt pad. One commenter wanted to know how long the drums and liners will last. Another commenter remarked that

because the drums have a 20-year life expectancy they must be well past their "safe" expected usefulness. Two commenters wanted to know whether wastes were leaking through the liners or from the drums. Finally, a commenter wanted to know more about the design of the pad itself and whether the pad or something under the pad would prevent the wastes from leaching or seeping into the ground. (W7-5, W10-1, W10-2, W10-3)

Response: The life expectancy of the drums, liners and asphalt pad beneath the wastes is not known. The wastes disposed on Pad A contained no liquids and were in solid form when disposed. However, for purposes of evaluating current and future risk to human health and the environment, the quantity of waste contained in the boxes was assumed to be free to migrate immediately (i.e., the boxes and associated liners were not considered a barrier to movement of the waste) and the quantity of the waste in the drums was assumed to be free to migrate in 100 years (i.e., the drums and associated liners were assumed to totally fail in 100 years). In addition, the asphalt pad was not considered a barrier to movement of the solid wastes.

The most likely transport mechanism at Pad A would be water in the form of precipitation (rain or snow) that permeated the overlying soil cover and moved through the wastes. The amount of water that actually permeates the Pad A cover is relatively limited due to the arid environment at the INEL (e.g., infiltration rates measured in undisturbed areas surrounding the RWMC range from 0.8 to 1.1 cm/yr) as well as the fact that the sloped sides of the existing cover promote surface water runoff, thereby further reducing infiltration.

Pad A was constructed by placing 5.1 to 7.5 cm (2 to 3 in.) of asphalt over approximately 7.5 cm (3 in.) of gravel base. For modeling purposes, this type of pad is assumed to be permeable or to have cracked and could allow contaminants to migrate to the subsurface area beneath the pad. The selected remedy must therefore minimize infiltration through the cover and potentially through the pad. Monitoring and institutional controls are also part of the selected remedy and will serve to ensure the selected remedy will be protective of human health and the environment.

3. **Comment:** Three commenters noted that DOE's documents and illustrations demonstrated that Pad A was built for monitored retrievable storage. Because the drums and boxes were obviously not meant for long-term storage, it was difficult to believe that Pad A was engineered as a long-term solution. The wastes were probably originally put on an asphalt pad due to concerns about the contents. One commenter wanted to know how DOE originally planned to sort and clean up the wastes on Pad A. (W7-3, W7-9, T5-1, T10-5)

Response: Based on reviews of historical reports and interviews with personnel involved in the design and construction of Pad A, the pad was designed as a permanent, rather than a temporary, disposal site. Due to basalt outcroppings near the surface of the north-central portion of the SDA (the current location of Pad A) and a desire to maximize radioactive waste disposal within the boundaries of the SDA, a decision was made not to remove the basalt by blasting (and thereby creating another disposal pit) but, rather, level the area and pour an asphalt pad upon which the waste would be placed and then covered with soil.

The maintenance of the existing cover, monitoring of the wastes, and continued use of institutional controls in the selected alternative will ensure long-term protectiveness of human health and the environment.

4. **Comment:** Two commenters questioned the accuracy and reliability of the characterization of the wastes in Pad A, remarking that DOE used unverified values from the shippers of the waste rather than performing its own characterization. (W5-4, T10-6)

Response: Characterization of the types and concentrations of the wastes on Pad A was based on shipping records from the waste generators (e.g., Rocky Flats Plant) that shipped waste to Pad A as well as the INEL's disposal records. These records were supplemented with process information obtained from the operating facilities that produced the wastes and interviews with personnel from those facilities. Although sampling is often useful in characterizing a site, it was not considered practical or feasible in the case of Pad A because of the heterogeneity of the waste. In addition, characterizing a heterogenous site such as Pad A could result in information that is less reliable than the process knowledge available on the wastes. The characterization of the wastes on Pad A did include the results of the analyses performed on the contents of the drum of salts retrieved in 1989, which indicated that the nitrated salts in the drum closely matched the contamination types and concentrations listed in DOE's records. Thus, historical records, process knowledge, and limited characterization information were used to confirm the information and assumptions used in the Pad A investigation. The agencies believe that the information they have obtained adequately characterizes the wastes on Pad A for purposes of this action.

5. **Comment:** One commenter wanted to know whether an audit had been done, then suggested that audits must be done to ensure that the present materials on Pad A were properly stored and maintained. (W11-4)

Response: The agencies share the commentor's concern with proper storage and maintenance of Pad A wastes. Audits, as the term is believed to be used here, were performed in 1979 and again in 1989 when the containers were visually inspected to determine their condition. In addition to these inspections,

environmental monitoring at Pad A has been conducted since the pad was closed in order to provide an early indication of a gross release of materials from the pad. The selected alternative will provide protectiveness of human health and the environment through maintenance of the cover and monitoring of the wastes to provide early indication of potential releases.

Risk Assessment

6. **Comment:** Several commenters noted that DOE's studies failed to address the known long-term geologic and hydrogeologic threats at the INEL. They indicated that it was unconscionable and unacceptable for DOE not to analyze the risks to the groundwater or the air in its environmental assessment. For instance, catastrophic events could change the course of the Big Lost River so that it flowed into the complex, potentially releasing wastes to the environment. Flooding from rapid snowmelt and failure of the Mackay Dam were also of concern. Another commenter stated that the risks associated with a failure of Mackay Dam were presented in the Waste Management Operations Environmental Impact Statement. Wastes disposed of at the RWMC, such as those on Pad A, could be released to the environment during a catastrophic event. One commenter disagreed, noting that seismic activity resulting in lava flows at the RWMC was as likely to permanently bury the wastes providing an effective seal against release to the environment. (W5-5, W11-2, T1-9, T1-10, T1-12, T1-14, T1-15, T1-16, T2-11, T4-4)

Response: The possible effects to Pad A from the occurrence of a catastrophic event were not quantitatively evaluated because of the large uncertainties these events the impacts of which may be positive or negative. The evaluation period was set at 1,000 years because uncertainties associated with the modeling approach become unreasonably large beyond this time period.

Impacts from increased infilitration rates due to flooding were addressed in the sensitivity analysis (Appendix H) of the Remedial Investigation report. The analysis indicated that flooding events would have a negligible effect on increasing the average nitrate concentration levels in the aquifer (i.e., by a factor of 2 or 3). Because the wastes on Pad A are above ground level at the RWMC, it is unlikely that increased infilitration rates will strongly affect the transport of the Pad A waste near the surface. The analysis indicated that, although waters could migrate into the subsurface and increase the transport velocity of wastes that have leached into the unsaturated zone, the flooding events would have minimal impact on the outcome of the fate and transport modeling (i.e., the predicted average concentration levels of contaminants would not significantly change the results of the risk assessment).

7. **Comment:** One commenter wanted to know whether snow is removed from the RWMC. (T1-17)

Response: Snow is removed from the roads, parking lots, and other areas which require access.

8. **Comment:** One commenter questioned what would happen if an animal burrowed into Pad A. Could the Pad A wastes seep out? (W10-4)

Response: This scenario (i.e., burrowing animals) was evaluated in the baseline risk assessment, performed as part of the Pad A Remedial Investigation/Feasibility Study (RI/FS) and was not considered to pose an unacceptable health risk from this exposure mechanism. The wastes at Pad A, which are solid wastes, not liquids, consist primarily of nitrate salts, depleted uranium waste, sewer sludge, inorganic salts, dirt, concrete, and other miscellaneous materials buried in plywood boxes or 55-gal drums. Monitoring has been conducted to detect any contaminant migration from Pad A since its closure in 1978. Contaminants attributable to Pad A have not been detected in the air, soil, or water samples taken on or near Pad A. Potential routes of migration for Pad A contaminants are direct exposure to the wastes due to erosion of the cover and infiltration of precipitation through the wastes causing contaminants to move to groundwater. As discussed in Section 5 of the RI/FS, burrowing animals may be able to reach the Pad A wastes, and the potential exists for them to bring wastes to the surface. The results of the ecological risk assessment indicate that burrowing activity, as well as other transport mechanisms, are not expected to have significant effects on the local ecosystem or on human health. Because institutional controls such as access and land use restrictions are included in the selected alternative, the likelihood of direct human exposure to the contaminants through this transport mechanism is extremely small. Further, because inspections and monitoring of the site, and repair and maintenance of the cover will be conducted as part of the selected alternative, evidence of burrowing animals at the site will be detected and corrective measures will be taken to prevent wastes from migrating due to burrowing activities.

9. **Comment:** One commenter wanted to know what data DOE possesses that allows a quantitative determination of risk to 2 parts in 10^{-13} (see Table 1 on page 7 of the Proposed Plan). The comment went on to note that if DOE has this accuracy, then the number of significant digits in the rest of the carcinogenic risk information is wrong. If DOE cannot quantify risk below 10^{-6} or 10^{-7}, it should present the results to reflect this. (W3-2)

Response: The Pad A baseline risk assessment, performed as part of the RI/FS, calculated carcinogenic risk values based on the fate and transport modeling results. The resulting risk values are derived by multiplying the cancer slope

factors for individual chemicals (provided by EPA) by the estimated daily intake (derived from the modeling). This approach represents the standard EPA derived risk assessment methodology. A quantitative risk estimate of 2×10^{-13} does not imply that this degree of accuracy is implicit in all cancer risk estimates. Rather, the estimated lifetime excess cancer risk estimate indicates that the expected risk is considerably less than the EPA's risk range of 10^{-4} to 10^{-6}.

10. **Comment:** One commenter pointed out that the Proposed Plan states that nitrate concentrations in groundwater at the Pad A boundary will reach 112 mg/L. Previous text indicates this will occur in about 2228. The values are qualified by pointing to conservative estimates in modeling. What is the cumulative quantitative effect of the modeling? Associated with this, what is the accuracy and precision of the model? Can it be quantitatively demonstrated that the presented results are unreasonable? If so, why were they presented? If not, then these values should drive the risk assessment, resulting in a risk to infants from exposure to nitrates that is clearly unacceptable. (W3-1)

Response: Based on the assumptions used in the fate and transport modeling for the baseline risk assessment, MCLs for nitrates in groundwater were calculated to be exceeded at the WAG 7 boundary; however, groundwater concentrations based on actual infiltration rates are expected to be lower. For example, the infiltration rate used in the modeling was 5 cm/yr. Using actual infiltration rates of 0.8 to 1.1 cm/yr, MCLs at the WAG 7 boundary are not expected to be exceeded. The assumptions used in the model were as realistic as possible but were skewed towards the conservative to ensure that potential risks were not underestimated. The uncertainties associated with the assumptions can be found in Section 7.1.4 of the RI/FS. The impact of the conservative modeling results in a tendency to overestimate potential concentrations of contaminants that could reach the aquifer.

11. **Comment:** Several comments were directed toward the timeframe used by DOE for their analysis. One commenter observed that it was farcical for DOE to limit their analysis to 1,000 years when the contaminants will be dangerous for much longer than that. The commenter went on to remark that the only reason DOE did not analyze risk beyond the 1,000-year window was because their models were not sufficiently accurate to predict the fate of the wastes beyond that time. However, another commenter disagreed with this assessment, reasoning that for wastes such as those on Pad A, 1,000 years was too long a period of time for risk assessment purposes. (W5-3, T1-8, T2-9)

Response: The evaluation period was set at 1,000 years because uncertainties associated with the modeling approach become unreasonably large beyond this time period. Due to the large uncertainties associated with episodic events (i.e., ice ages, major earthquakes, meteor impacts, and volcanism), these events were

not modeled. Because wastes will remain on-site, the Pad A remedy will be reevaluated in two years and every five years thereafter to ensure continued protectiveness. In the event that any fundamental assumptions made in the Pad A investigation change (e.g., loss of institutional control due to loss of DOE control or future land use changes) the need for additional action would then be considered.

12. **Comment:** A written comment noted that information provided at the Idaho Falls public meeting addressed the radiotoxicity of a few, but not all, contaminants in the Pad A wastes and did not address chemical toxicity at all. Another commenter questioned what nuclear debris has a 10-year half-life and if it referred to plutonium. (W5-1, W7-4)

Response: It is true that during the Idaho Falls public meeting, the radiotoxicity of all the contaminants at Pad A was not addressed. However, the BRA contained in the RI/FS evaluated all the contaminants, both radiological and chemical. They were evaluated on exposure mechanisms, concentration levels, relative toxicity, and the carcinogenic risks posed to human health and the environment. Specifically, a detailed discussion of contaminant toxicity is contained in Section 6.1.2 of the RI/FS and Section 6.1.3 of the ROD. The RI/FS is located in the administrative record under file number AR3.10.

Modeling performed in the BRA indicated that radionuclides (with the exception of potassium-40) would not reach the aquifer within 1,000 years. The modeling showed potassium-40 reaching the aquifer within the 1,000 year timeframe but not at sufficient concentrations to pose an unacceptable risk. Inorganic compounds were also evaluated in the risk assessment and only sodium nitrate and potassium nitrate were shown to present any potential risk to the human health and the environment.

The radionuclide isotopes found at Pad A have half-lives ranging from a few months to several thousand years. A half-life of 10 years does not necessarily refer to plutonium. This information can be found in the Remedial Investigation report (Section 4).

13. **Comment:** One commenter noted that a post-control period infant is not an industrial receptor (see Table 1 on page 7 of the Proposed Plan). (W3-3)

Response: The term "post-control period" refers to that timeframe in the future when the INEL may be used for residential or industrial development. The potential for adverse effects to small children or infants is associated with the assumed future residential development. The Proposed Plan incorrectly identified infants as industrial receptors for the post-control period.

14. **Comment:** Several commenters indicated that it does not do much good to assess the risk from just Pad A as it represents a very small fraction of the wastes at the RWMC; the total composite risk from all the WAGs must be studied. If the INEL is available for unrestricted use (see Item 3 on Page 6 of the Proposed Plan), it is an unrealistic scenario to only evaluate risk for a single unit. Risk from all the units may be additive. If risk is only addressed unit by unit through the INEL, an actual risk may not be recognized. (W1-2, W3-4, W5-1.1)

Response: The agencies agree with the commenters. The cumulative risks from all of the pits and trenches located at the RWMC (WAG 7) will be evaluated in the TRU Pits and Trenches OU 7-13 RI/FS. Cumulative risks from inactive waste sites throughout the entire RWMC will be evaluated in the Comprehensive WAG 7 RI/FS. All of the risks from all of the WAGs located at the INEL will be evaluated in the Comprehensive WAG 10 (sitewide) RI/FS. This approach is consistent with the NCP. One of the stated purposes of the NCP [§ 300.3(b)] is to provide for efficient, coordinated, and effective response to releases of hazardous substances. Section 300.430(a) of the NCP states that complex sites should generally be addressed in OUs when early actions are necessary or appropriate to achieve significant risk reduction quickly, when phased analysis and response is necessary or appropriate given the size or complexity of the site, or to expedite completion of the total site cleanup. The agencies recognized that cumulative assessments should be done and have scheduled comprehensive investigations on both the individual WAG and the INEL-wide levels. At the same time, the agencies acknowledged that cumulative risks could not be evaluated until adequate information concerning each individual site is collected. The FFA/CO Action Plan includes the schedules for addressing each of the OUs and WAGs. This approach was presented to the public for review and comment during the comment period on the FFA/CO before it was signed by the three agencies.

15. **Comment:** One commenter wanted to know whether the time of peak nitrate concentration at the INEL boundary and the RWMC boundary coincide with the peak under Pad A. In addition, the commenter wanted to know what the ambient conditions in the Snake River Plain Aquifer will be, considering the number of potential contaminant contributors. (W3-5)

Response: Peak nitrate concentrations in groundwater beneath Pad A will occur before peak values are reached at either of the other boundaries. Based on conservative fate and transport modeling, ambient groundwater conditions beneath Pad A could potentially be affected by the more soluble inorganic contaminants (e.g., nitrates). The impacts to groundwater conditions from these contaminants are dependent upon many variables (e.g., distance from source, infiltration rates). Ambient conditions are not expected to be affected by Pad A contaminants if the selected remedy is implemented.

16. **Comment:** One commenter stated that actions at Pad A must comply with the Nuclear Waste Policy Act and Nuclear Regulatory Commission disposal criteria. (T10-3)

Response: The Nuclear Waste Policy Act of 1982, as amended, establishes requirements for selecting and constructing a geologic repository for disposal of high-level wastes and spent nuclear fuel and for the interim storage of such wastes pending development of the repository. Because Pad A does not contain either high-level waste or spent nuclear fuel, this law does not apply to Pad A wastes, nor is it relevant and appropriate in the circumstances of the Pad A proposed action.

Under the Atomic Energy Act, Congress divided the nuclear industry into two separate entities, each with separate responsibilities. The Nuclear Regulatory Commission (NRC) regulates the commercial nuclear industry (i.e., power generation). The DOE is responsible for researching and planning the country's energy supply and delivery, including nuclear power, developing and manufacturing nuclear weapons, and managing high-level and low-level radioactive waste produced from these activities.

Thus, there are only limited situations when DOE operations fall under the jurisdiction of the NRC. Except for these very limited situations, NRC standards do not legally apply to DOE activities. This is why NRC regulations are not listed as ARARs in Pad A. However, NRC standards are reflected in many of the internal DOE orders, which are mandatory requirements for all DOE facilities and activities. DOE Order 5820.2A is included in the Pad A ROD as a to-be-considered (TBC) guidance. This order contains the substantive requirements included in NRC regulations.

In the case of Pad A, remedy selection is based on CERCLA, as amended by SARA, and the regulations contained in the NCP. All remedies must meet the threshold criteria established in the NCP: protection of human health and the environment and compliance with ARARs. As identified in the ROD, ARARs at Pad A include compliance with the relevant and appropriate substantive requirements of the Idaho Hazardous Waste Management Act. In addition, various EPA guidance documents and two DOE Orders (5820.2A, Radioactive Waste Management and 5400.5, Radiation Protection of the Public and the Environment) are cited as TBC guidance for purposes of implementing the Pad A selected remedy. The agencies agree that these standards will be the criteria at Pad A.

Proposed Plan and Public Involvement

17. **Comment:** One commenter asked whether public hearings or comment periods were held before Pad A was employed in 1972. Another commenter noted that there was a need for substantive public participation in the planning process; substantive public participation would result in a reevaluation and readjustment of the agencies' priorities. (W7-2, T10-2)

Response: Based on reviews of historical documents, there is no evidence that indicates public hearings were held prior to "employing" Pad A. During the Cold War, DOE conducted high-technology research and produced nuclear weapons. This needed to be done quickly while also maintaining national security which, in most instances, precluded public involvement. Growing concern among the public about problems with the environment resulted in the enactment of several programs to ensure that communities are informed about and involved in hazardous waste issues. These include the National Environmental Policy Act of 1969 (NEPA); CERCLA, as amended by the 1986 SARA; and the Resource Conservation and Recovery Act (RCRA) of 1976; all as subsequently amended. The agencies consider public participation to be a critical element of environmental restoration activities as well as other waste management planning activities at the INEL. Several public participation opportunities are available to the public; information about these opportunities is included in the INEL Community Relations Plan or can be obtained from the INEL Community Relations Coordinator at (800) 708-2680 or (208) 526-6864.

18. **Comment:** One commenter indicated that DOE should provide an explanation of the white tent-like structure on Pad A pictured on the cover of the Proposed Plan. (W8-3)

Response: The white tent-like structure on Pad A is called a "yurt." It was placed on Pad A in 1989 to provide a controlled environment, and prevent releases of contaminants to the atmosphere, during the drum retrieval effort conducted in 1989. Although the project was safely completed and closed-out, the yurt was never removed.

19. **Comment:** Two commenters commended DOE on the contents and information provided in the Proposed Plan. One commenter indicated approval of DOE's approach, noting that DOE indicated when the information supplied represented deductions rather than facts. (W2-1, W8-4)

Response: Comment noted.

20. **Comment:** Public hearings should involve the decision-makers who set the criteria, methodology, values, and made judgments leading to the alternatives that are being considered. The items on which the study is based have not been presented. Instead, the public is given a glossy, narrow definition of the problem — public relations rather than a review of the actual problem. If the public was given the opportunity to review the larger, inherent problems; more reasonable, efficient, and long-term solutions could be attained. (T7-1)

Response: The agencies agree that public involvement in the CERCLA process is critical to ensuring successful remediation of INEL waste sites. The public meetings conducted in Moscow, Boise, and Idaho Falls were attended by Mr. Dean Nygard, Federal Facilities Manager for the Idaho Division of Environmental Quality; Ms. Mary Jane Nearman, U.S. Environmental Protection Agency Region 10, RWMC Waste Area Group Manager; and Mr. Greg Hula, U.S. Department of Energy Idaho Operations Office, Pad A Project Manager. These individuals were present at the meetings to provide detailed information concerning this action, answer questions, and take formal comments. These same individuals reviewed and determined the criteria, methodology, and values that needed to be reflected in the Pad A remedial action, based on legal requirements and agency policies and guidance.

A series of opportunities for public information and participation in the remedial investigation and decision process for Pad A were provided over the course of 21 months beginning November 1991 and continuing through August 1993. For the public, the activities ranged from receiving a fact sheet, *INEL Reporter* articles and updates, and a Proposed Plan, to having a telephone briefing, four public scoping meetings, three public meetings, and two open houses to offer verbal or written comments during two separate 30-day public comment periods. The proposed plan is intended to be a summary of the detailed RI/FS that was conducted. It references the entire administrative record for members of the public who are interested in reviewing more detailed information on the proposed action.

The Pad A RI/FS process followed the process required under CERCLA, as amended by SARA, and the NCP. All three agencies have been involved in the scoping, implementation, and decision process for this investigation. Further questions regarding specific technical issues or the public participation process can be directed to the INEL Community Relations Coordinator at (800) 708-2680 or (208) 526-6864.

21. **Comment:** Several commenters remarked on procedural aspects of the public meetings. Some commenters felt that a specific time should be allotted to each individual giving public testimony. However, another commenter noted that the purpose of the meeting was to gain public comment and that it was unfair to

arbitrarily limit time allowed for testimony. One commenter questioned the level of information available at the open houses and indicated his participation in the public meeting was a result of insufficient information at the open house. (W9-1, T1-1, T1-6, T1-18, T1-19, T2-1, T3-1, T4-1)

Response: The public meetings for Pad A provided two opportunities for citizens to become involved: an informal question and answer period, and formal comment period. The informal question and answer period was set up to allow the public to ask questions or to seek clarification on information presented prior to or at the meeting, or in lieu of making formal comment. Generally no time restrictions are placed on either activity to ensure that citizens have sufficient opportunity to have their questions answered and comments and concerns noted; however, at times it may be necessary to limit the time allowed for each formal comment to allow all citizens an opportunity to comment. In addition to providing an opportunity for formal comment at public meetings, the agencies also provided other means by which the public could enter their comments. Oral comments could be entered on a tape recorder provided at both the open houses and the public meetings. The INEL Community Relations telephone was equipped with recording equipment for oral comments. Finally, written comments could be submitted either on the individual's own stationery or on the self-addressed, postage-paid comment forms provided in the Proposed Plan and made available at all activities.

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22. **Comment:** One commenter asked to see other citizens' comments. (W2-4)

Response: All oral comments, as given at the public meetings, and all written comments, as submitted, are repeated verbatim in the Administrative Record for OU 7-12. The comments are annotated to indicate which response in the Responsiveness Summary addressed each comment. It should be noted that the Responsiveness Summary groups similar comments together, summarizes them, and provides a single response for each comment group. The Administrative Record also includes transcripts of the public meetings — including the agencies' presentation, the question and answer period, and formal comment and testimony.

The Administrative Record is available to the public in eight regional INEL information repositories: the INEL Technical Library in Idaho Falls; city libraries

in Idaho Falls, Pocatello, Twin Falls, Boise, and Moscow; the Idaho State Library in Boise; and the Shoshone Bannock Library in Fort Hall. The original documents comprising the Administrative Record are located at the INEL Technical Library; copies from the originals are present in the seven other libraries. These copies were placed in the information repository sections or at the reference desk in each of these libraries.

General Comments on the Proposed Alternatives

23. **Comment:** One commenter mentioned the importance of preventing releases to the air that could occur through mistakes in handling. The commenter remarked that workers should not be put at risk through contact with the waste. (T8-3)

Response: The selected alternative on Pad A consists of recontouring, slope correction, and maintenance and monitoring of the existing Pad A cover. Under the selected remedy, no wastes would be handled, exhumed, repackaged, transported, or disturbed in any manner. The low-level wastes at Pad A will remain buried and undisturbed. Thus, the possibility of a release to the ambient air, soil, or groundwater via worker mishandling is virtually nonexistent. In addition, monitoring and inspections will continue to ensure early detection of any potential releases.

24. **Comment:** Several commenters noted that the cost estimates for implementation of the alternatives were outrageous and asked DOE to reexamine the estimates. One commenter thought the estimate of $45,000/year for monitoring seemed a bit inflated, given the only potential risk is from a single contaminant, nitrate. Because nitrates are relatively inexpensive to monitor in groundwater and because monitoring techniques and instruments are continually improved, the commenter believed that monitoring costs will actually decrease. However, the commenter acknowledged that much will depend on the sampling strategy/decision. (W8-2)

Another commenter questioned why a range was given for the estimate for Alternative 1A while relatively precise costs were given for Alternatives 1B and 2. The commenter wanted more information about the precision of the estimates. Finally, the commenter noted that the information in the Proposed Plan appeared to be skewed to influence readers to accept Alternative 2, rather than being objectively presented with a logical conclusion. (W3-6, W4-2, T10-7)

Response: As required by the NCP, cost estimates provided in the Proposed Plan are rough estimates (i.e., -30% to +50%) given for comparison purposes only. Cost estimates for sampling and monitoring activities will be provided in greater detail in the Remedial Design phase which follows the ROD. Costs may appear high because overhead rates with the management and operations contractors and general and administrative rates are all factored into the ultimate cost estimate.

The cost estimates for the technical portion of the alternatives evaluated are consistent with the costs associated with similar activities conducted at other landfills across the country, as discussed in Appendix C of the Feasibility Study, which formed the basis for the cost estimates associated with the alternatives evaluated in the FS; however, the cost estimates also include administrative costs associated with the project, which tend to be higher within the government, and the DOE system specifically, than in the private sector. The cost estimates contained in the ROD are based on sampling the groundwater, air, soil and surface water for a range of contaminants known to be present in Pad A, not exclusively nitrates.

Several combinations of different earthen material types were evaluated within the first subalternative ("Alternative 1A") resulting in a range of costs. Every effort was made to objectively present each alternative so that a rational comparison could be made, including cost comparisons. Table 16 in the ROD presents a cost comparison of the considered alternative for Pad A.

25. **Comment:** Several commenters questioned whether DOE considered all possible alternatives for remediation of Pad A. One commenter questioned whether alternatives proposed for or implemented at other waste areas at the site were considered for Pad A. One commenter remarked that DOE opted for the proposed alternatives — to maintain and monitor the existing dirt cover — because it did not know what else to do. The commenter went on to question the wisdom of dumping more dirt on what is already a mess. (W7-8)

Several comments were received regarding the feasibility of treating Pad A wastes to eliminate the radioactive constituents or to reprocess or recycle the wastes for positive uses. One commenter wondered whether DOE considered processing and elimination of radioactive materials, while another wanted to know whether DOE was investing in research to determine whether radionuclides could be recycled or reused. One commenter noted that DOE should find a positive use for the radionuclides currently being thrown away and in the interim find safe, long-term storage solutions for its radioactively contaminated wastes. Another commenter wanted to know how much of DOE's budget is being used for research to find positive uses for its wastes, such as the wastes on Pad A. (W11-1, T5-2, T6-1, T8-9)

Response: The results of the remedial investigation and BRA indicate that the existing cover is a protective barrier for the Pad A contents and that leaving the Pad A wastes in place does not pose an unacceptable risk to human health and the environment. In accordance with CERCLA and the FFA/CO, if an area does not pose an unacceptable risk, cleanup alternatives that involve excavation, treatment, and disposal elsewhere are not typically evaluated. Nevertheless, the preferred alternative (long-term maintenance of the soil cover, groundwater

monitoring, and institutional controls such as restricted access) was selected to prevent direct contact with the wastes. Maintenance of the cover is being done to address the uncertainties associated with the risk modeling and to ensure that Pad A will be a protective unit.

Aside from the Pad A context, DOE continues to research ways to minimize, reuse, or stabilize/treat its wastes. DOE has budgeted just under $1 billion for technology development within the DOE complex.

26. **Comment:** One commenter asked how the pad will be monitored for its structural integrity if it is buried. (W11-3)

Response: The risk assessment, which indicated an acceptable long-term risk to human health and the environment, assumed that the containers and the asphalt pad failed and would not act as barriers to contaminant migration (i.e., it was assumed the Pad A wastes are not in containers and that the waste is placed directly on native soil.). Therefore, there is no need to monitor or audit the condition of the asphalt to ensure its continued structural integrity; however, monitoring for contaminant releases will be conducted as part of the selected remedy.

27. **Comment:** One commenter requested a formal WAG-wide Environmental Impact Statement (EIS) be completed before any wastes are declared to be permanently disposed of at the INEL. (W5-2)

Response: The analyses and processes required by CERCLA and the NCP for remedy selection involve essentially the same scope, level of detail, and subject matter that are appropriate under NEPA. DOE has issued a policy which requires integration of NEPA values into the CERCLA decision processes where practicable. Also, through the CERCLA public comment process, DOE carries out NEPA public involvement goals and responds to all public comments received in the responsiveness summaries that are prepared. Consistent with DOE's policy, relevant NEPA values for a particular CERCLA action are identified and may be discussed in the CERCLA documentation that is prepared; alternatively, supplemental information may be prepared to ensure these values are considered. This approach is needed to achieve the CERCLA statutory mandate for expeditious and prompt cleanups and to allow flexibility in formulating the response to be taken at different OUs. DOE reviewed the Pad A proposed action and concluded that the action qualified for a categorical exclusion (CX) consistent with DOE's published NEPA procedures. Therefore, an EA or EIS is not considered to be necessary for Pad A. NEPA's objective of considering the environmental impacts associated with the selected alternative for Pad A was met primarily through the CERCLA BRA process, which includes an ecological risk assessment component. This risk assessment concluded that the selected

alternative does not pose an unacceptable risk to the environment. The NEPA objective of assessing cumulative environmental impacts of all WAG 7 remedial activities will be met through a WAG-wide risk assessment that will be conducted as part of a WAG-wide RI/FS, as well as through the INEL Environmental Restoration and Waste Management (ER&WM) EIS, which is currently being prepared. A draft of that EIS is expected to be issued for public comment in FY-94.

28. **Comment:** One commenter noted that, while the next 30 years will bring new technologies, there was no need to implement interim measures such as adopting Alternative 2. (W4-1.1)

Response: Despite the likelihood that new technologies will be discussed and/or implemented in the next 30 years, CERCLA still mandates that actions be taken to assure the protection of human health and the environment from releases of hazardous substances. Further, periodic reviews of monitoring data, site and land use conditions will be conducted to verify the assumptions of the BRA. In the event of changing conditions or if fundamental assumptions are no longer accurate, the need for additional action, including application of treatment alternatives, would then be reevaluated.

29. **Comment:** Two commenters questioned DOE's preference for a soil cover rather than a synthetic cover.

One commenter indicated that none of the proposed alternatives will prevent water from entering the Pad A cover. The Pad A wastes must be contained; water must be prevented from infiltrating the wastes. The commenter indicated that the proposed covers should be designed with 100- or 125-mil welded plastics over a 6 in. clay layer over a layer of clean sand (no rocks). (T8-1)

Another commenter indicated that only Alternative 1, with a synthetic cover, should be considered based on the negligible cost difference between the alternatives and the benefits from implementing that alternative. (W4-1)

Response: The agencies' decision to choose Alternative 2, Limited Action, was not based solely on a comparison of the pad's cover (i.e., soil/clay v. synthetic). The three alternatives considered in the Pad A ROD were evaluated based on a comparison of the nine CERCLA decision criteria. Thus, the Pad A feasibility study evaluated the following criteria to determine the best course of action at this site: overall protection of human health and the environment; compliance with ARARs; long-term effectiveness and permanence; reduction of toxicity, mobility, or volume through treatment; implementability; cost; and state acceptance. A summary of this evaluation is included in the Proposed Plan (pp. 9-12) and the Section 8 of the ROD. Based on this comparative analysis, the agencies chose

Alternative 2 because they determined this alternative provided the best balance of trade-offs. Alternative 2 would provide the best overall protection and compliance with ARARs, ensure risks are reduced, provide adequate protection for both long- and short-term effectiveness, can be easily implemented, and is cost effective.

30. **Comment:** One commenter recommended that DOE successfully complete one remediation activity before beginning the next. Lessons learned at Pit 9 could then be used to remediate Pad A wastes. (T8-2)

Response: Lessons learned at Pit 9 are not necessarily applicable to Pad A because the results of each site's evaluation demonstrated a need for different remedial actions. In Pad A, the BRA indicated no unacceptable risks were present assuming prolonged direct contact to the Pad A waste is prevented, and thus Alternative 2, Limited Action, was chosen. Also, Pit 9 was an interim action due to the large volumes of oils, solvents and relatively large amounts of radioactive contaminants. In contrast, Pad A is a permanent disposal action and does not contain these types of wastes. Thus, lessons learned at Pit 9 would not necessarily be used to remediate Pad A waste because the results of the RI/FS and BRA indicated remediation (i.e., removal, treatment, and disposal) was not necessary to adequately protect human health and the environment.

31. **Comment:** Two commenters indicated that potential environmental problems should be dealt with now, rather than shifting the burden to future generations or to other communities. One of the commenters expressed concern that if the Pad A wastes were not dealt with now, they may never be dealt with. (T1-7, T10-4)

Response: The RI/FS and BRA evaluated both current and future potential risks from Pad A waste to determine potential environmental problems to both current and future generations. This analysis indicates that conditions at Pad A are not expected to result in environmental problems to current or future generations. The INEL, including Pad A, is being evaluated under an FFA/CO entered into between DOE-ID, EPA, and the State of Idaho in order to ensure compliance with CERCLA, RCRA and the Idaho Hazardous Waste Management Act (HWMA). These statutes require that cleanup actions be taken if there is a release or threat of a release of a contaminant to the environment which exceeds regulatory or risk-based cleanup standards. The remedial investigation for Pad A indicated that there is currently no unacceptable risk to human health and the environment. Therefore, the question remained, could contaminants migrate from Pad A and present an unacceptable risk to human health and the environment at some time in the future? The Pad A risk assessment was conducted to answer this question. The risk assessment using available data, including generator records, indicated the risk to human health and the environment would be within

the acceptable risk range as defined by CERCLA assuming prolonged direct contact to the waste is prevented. It is important to note that the computer model used conservative assumptions to be on the safe side (e.g., the model assumed that the Pad A waste materials were not containerized and were disposed of directly onto the soil as opposed to on an asphalt pad.)

The results of the remedial investigation and BRA indicate that the existing cover is a protective barrier for the Pad A contents and that leaving the Pad A wastes in place does not pose an unacceptable risk to human health and the environment assuming institutional controls are maintained to prevent prolonged direct contact with the waste. In accordance with CERCLA and the FFA/CO, if an area does not pose an unacceptable risk, cleanup alternatives that involve excavation, treatment, and disposal elsewhere are not typically evaluated. Nevertheless, the selected alternative (long-term maintenance of the soil cover, groundwater monitoring, and institutional controls such as restricted access) was selected to prevent direct contact with the wastes. Maintenance of the cover is being done to address the uncertainties associated with the risk modeling and to ensure that Pad A will be a protective unit.

32. **Comment:** DOE is expending resources to remediate Pad A while it continues to bury equally environmentally hazardous wastes at the RWMC. (T10-1)

Response: DOE is not continuing to bury mixed wastes (i.e., wastes that are radioactive as well as defined as hazardous pursuant to RCRA and HWMA) at the RWMC and has not disposed of these types of wastes since approximately 1984. Rather, these wastes are currently being stored at the Transuranic Storage Area (TSA) at the RWMC in accordance with RCRA and HWMA. DOE is currently preparing documentation to obtain a Part B Permit (i.e., final permit) which will allow storage of these wastes at the TSA. The wastes currently being stored at the TSA will be retrieved and eventually transferred to the RWMC waste storage facility for eventual treatment and/or on- or off-site disposal. The only wastes that are currently buried at the Subsurface Disposal Area (SDA) are low level wastes (i.e., radioactive wastes with a transuranic activity of less than 10 nCi/g) in the SDA at the RWMC and disposal is conducted in accordance with low level waste acceptance criteria (WAC).

33. **Comment:** One commenter mentioned that nonradioactive contaminants are as much a concern as the radioactive contaminants since they are toxic and pose a permanent risk to human health and the environment. (W11-2)

Response: The agencies agree. Risks from nonradioactive hazardous contaminants (e.g., chlorides and nitrate salts) were evaluated in the BRA and it was determined that they posed no threat to human health or the environment. As identified in the ROD, the selected remedy at Pad A will be designed to

comply with the relevant and appropriate substantive requirements of the Idaho HWMA; various EPA guidance documents; and DOE Order 5820.2A, Radioactive Waste Management. The remedy at Pad A will meet all DOE Order requirements and the relevant and appropriate RCRA/HWMA requirements governing the closure of landfills that contain low-level radioactive waste and nonradioactive hazardous waste.

34. **Comments:** Several commenters had other general comments on the proposed alternatives.

Because the INEL was never meant to be a permanent repository for radioactive waste, a permanent home for the wastes should be found and the Pad A wastes removed and disposed of properly. (W1-1)

Another commenter noted that, because the RWMC requires active management, it was unsuitable for permanent disposal of wastes. (T1-16)

If elimination cannot be accomplished, then containment is necessary. The materials on Pad A are too dangerous to risk contamination of groundwater or the air. Deadly wastes must be contained as long as they pose a hazard to human health and the environment. (W11-2, T1-5)

Response: The INEL, including Pad A, is being evaluated under a FFA/CO entered into between DOE-ID, EPA, and the State of Idaho in order to ensure compliance with CERCLA, RCRA and the HWMA. CERCLA and RCRA/HWMA only require that cleanup actions be taken if there is a release or threat of a release of a contaminant to the environment which exceeds regulatory or risk-based cleanup standards. The remedial investigation for Pad A indicated that contaminants from Pad A do not currently pose unacceptable risks assuming prolonged direct contact to the waste is prevented. Therefore, the question remained, could contaminants migrate from Pad A and present an unacceptable risk to human health and the environment at some time in the future? The Pad A risk assessment was conducted to answer this question. The risk assessment based on available information, including generator records and using a computer model, indicated the risk to human health and the environment would be within the acceptable risk range. It is important to note that the computer model used conservative assumptions in order to be on the safe side (e.g., the model assumed that the Pad A waste materials were not containerized and were disposed of directly onto the soil as opposed to on an asphalt pad, and greater than normal rainwater infiltration rates were assumed).

The results of the remedial investigation and BRA indicate that the existing cover is a protective barrier for the Pad A contents and that leaving the Pad A wastes in place does not pose an unacceptable risk to human health and the environment so

long as institutional controls are maintained. In accordance with CERCLA and the FFA/CO, if an area does not pose an unacceptable risk, cleanup alternatives that involve excavation, treatment, and disposal elsewhere are not typically evaluated. Nevertheless, the selected alternative (long-term maintenance of the soil cover, groundwater monitoring, and institutional controls such as restricted access) was selected to prevent direct contact with the wastes. Maintenance of the cover is being done to address the uncertainties associated with the risk modeling and to ensure that Pad A will be a protective unit.

Agree
(Commenter Agreed with Selected Alternative)

35. **Comment:** Several commenters indicated their agreement with the Preferred Alternative selected by DOE. The Preferred Alternative was recognized as presenting the least risk to workers and the public and being the most cost-efficient alternative for the established objectives. One commenter noted that the logic, process, and justifications for the Preferred Alternative were presented well and made good sense. The commenter went on to indicate that he was glad to see the State of Idaho was willing to leave low-risk wastes at the RWMC. Another commenter noted that, as long as there is no real threat to the environment, DOE should not be wasting resources (i.e., tax dollars) on precipitous cleanup. (W6-1, W8-1, W12-1, T2-10, T4-6)

Response: DOE, EPA, and IDHW agree that limited action is the best alternative based upon the risk assessment, which shows that no unacceptable risk exists assuming prolonged direct contact with the Pad A waste is prevented. Monitoring, with independent verification of the data by EPA and IDHW, will ensure that the selected remedy will be protective of human health and the environment.

Disagree
(Commenters Disagreed with Selected Alternative)

36. **Comment:** Some commenters stated that the Selected Alternative (containment in place with monitoring) was not protective enough and that something else was necessary (i.e., excavation and disposal elsewhere). Specific comments are as follows:

Several commenters indicated that DOE's proposal not to remove the waste on Pad A was both unacceptable and irresponsible. Another commenter noted that all of the alternatives were unacceptable. (W1-1, T1-20, T8-1, T8-4, T10-4)

Another commenter wanted to see not only Pad A but the rest of the INEL cleaned up, questioning when and how something will be done with the wastes

that have been generated and stored at the INEL and noting that any haste on DOE's part will be lauded and a pleasant contrast to the usual diversion and delay. (W7-1)

Response: The INEL, including Pad A, is being evaluated under a FFA/CO entered into between DOE-ID, EPA, and the State of Idaho in order to ensure compliance with CERCLA, RCRA and the HWMA. CERCLA and RCRA/HWMA only require that cleanup actions be taken if there is a release or threat of a release of a contaminant to the environment which exceeds regulatory or risk-based cleanup standards. The remedial investigation for Pad A indicated that contaminants from Pad A do not currently pose unacceptable risks assuming prolonged direct contact with the waste is prevented. Therefore, the question remained, could contaminants migrate from Pad A and present an unacceptable risk to human health and the environment at some time in the future? The Pad A risk assessment was conducted to answer this question. The risk assessment used available data, including generator records, indicated the risk to human health and the environment would be within the acceptable risk range assuming prolonged direct contact to the waste is prevented. It is important to note that the computer model used conservative assumptions in order to be on the safe side (e.g., the model assumed that the Pad A waste materials were not containerized and were disposed of directly onto the soil as opposed to on an asphalt pad, and greater than normal rainwater infiltration rates were assumed).

The results of the remedial investigation and BRA indicate that the existing cover is a protective barrier for the Pad A contents and that leaving the Pad A wastes in place does not pose an unacceptable risk to human health and the environment assuming institutional controls are maintained. In accordance with CERCLA and the FFA/CO, if an area does not pose an unacceptable risk, cleanup alternatives that involve excavation, treatment, and disposal elsewhere are not typically evaluated. Nevertheless, the selected alternative (long-term maintenance of the soil cover, groundwater monitoring, and institutional controls such as restricted access) was selected to prevent direct contact with the wastes. Maintenance of the cover is being done to address the uncertainties associated with the risk modeling and to ensure that Pad A will be a protective unit.

Comments Deemed Beyond the Scope of the Pad A ROD

Comments and questions on a variety of subjects not specific to Pad A were received during the public comment period. Those subjects included alternate storage sites (i.e., WIPP), energy production costs, prior accidents at EBR-I, buffer zones around the INEL, Swedish bentonite canisters, etc., and are not responded to in this Responsiveness Summary. Additional information on these unrelated subjects can be obtained from the INEL Public Affairs Office in Idaho Falls or at the local INEL offices in Pocatello, Twin Falls, and Boise.

REFERENCES

Halford et al., 1993, *Remedial Investigation/Feasibility Study for Pad A, Operable Unit 7-12, Waste Area Group 7, Radioactive Waste Management Complex, Idaho National Engineering Laboratory,* July 1993.

Environmental Protection Agency, 1990, *National Oil and Hazardous Substances Contingency Plan (NCP),* at 40 CFR, § 300 *et seq.* EPA, Office of Emergency and Remedial Response, Washington, DC.

Environmental Protection Agency, 1991, *Federal Facility Agreement and Consent Order 1088-06-29-120 in the matter of the U.S. Department of Energy Idaho National Engineering Laboratory, Idaho Falls, Idaho.* December 1991.

U.S. Department of Energy, 1993, *Proposed Plan for Pad A at the Radioactive Waste Management Complex, Idaho National Engineering Laboratory,* July 1993.